

Application No.: 09/854,269

Docket No.: TESSERA 3.0-139 DIV

IN THE CLAIMS

1. (canceled)
2. (canceled)
3. (canceled)
4. (previously presented) A soldered assembly comprising:
  - (a) first and second elements having confronting surfaces, pads on said confronting elements arranged in pairs, each such pair including a pad on the first element and a pad on the second element; and
  - (b) solder masses associated with at least some of said pairs, each such solder mass being associated with the pads of one said pair and extending therebetween, said solder masses incorporating columnar inclusions dispersed therein, said columnar inclusions within at least one of said solder masses being oriented preferentially in the direction between the pads of the associated pair.
5. (previously presented) A soldered assembly as claimed in claim 4 wherein each said solder mass is elongated in the direction between the pads of the associated pair.
6. (previously presented) An assembly as claimed in claim 5 wherein the pads of each said pair are spaced apart from one another in a vertical direction normal to the confronting surfaces and offset from one another in a horizontal direction parallel to the confronting surfaces so that said elongated solder masses extend oblique to said vertical and horizontal directions.
7. (previously presented) A soldered assembly as claimed in claim 4 wherein said solder masses consist essentially of a lead-tin solder with between about 1% and about 5% copper, and wherein said columnar inclusions constitute a copper-rich phase within said solder masses.

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8. (previously presented) A soldered assembly as claimed in claim 4 wherein said columnar inclusions are formed as precipitates in said solder masses.

9. (previously presented) A packaged microelectronic element as claimed in claim 2 wherein said terminals overlie said front surface of said chip.

10. (previously presented) A soldered assembly comprising:

(a) first and second elements having confronting surfaces, pads on said confronting elements arranged in pairs, each such pair including a pad on the first element and a pad on the second element; and

(b) solder masses at at least some of said pairs, each such solder mass being associated with the pads of one said pair and extending therebetween, each said solder mass being elongated in the direction between the pads of the associated pair, the pads of each said pair being spaced apart from one another in a vertical direction normal to the confronting surfaces, the pad of each said pair on said first element being offset from the pad of that pair on the second element in a horizontal offset direction parallel to the confronting surfaces so that said elongated solder masses extend oblique to said vertical and horizontal directions, said offset directions of all of said pairs being the same so that all of said elongated solder masses slope in the same direction.